Federal Communications Commission
Washington, D.C. 20554

November 2, 2016

VIA ECFS ELECTRONIC DELIVERY

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Measuring Broadband America Program (Mobile Collaborative), GN Docket No. 12-264

Dear Ms. Dortch:

On September 22, 2016, representatives of broadband providers, public interest groups, companies, and other organizations met in person and via conference call with Commission staff to discuss schedules and milestones of the Measuring Broadband America Program (MBA) mobile efforts.[1]

Mr. Walter Johnston, Chief Electromagnetic Compatibility Division (EMCD), and James Miller, Senior Attorney Advisor welcomed collaborative members. Mr. Johnston announced the agenda for the meeting to discuss JSON conversion tools; mobile database schemas; SQL code for setting report variables; and server and health dashboards.

Mr. Miller announced that an open source tool was released on Github to convert the result files produced by the FCC Speed Test App on users' devices and saved in the JSON format into a set of CSV files that can be easily imported into a relational database environment.[2] Detailed instructions on how to configure and use the software to convert result files is available on Github, and is similar to earlier versions released in the past but easier to use with result files directly exported from the App by users. The software tool is written in PHP and requires a working PHP interpreter and the configuration of three directories of the file to function. Mr. Miller explained the Github website provides a variety of easy ways to communicate feedback or improvements but invited any comments also be sent directly to the MBA program managers.

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[1] A list of attendees and presentation materials are attached to this filing in GN Docket No. 12-264.
[2] JSON to CSV conversion tool for FCC Speed Test JSON Result files written in PHP, available at https://github.com/FCC/mmba_JSON_bulkimporter (source code for the mmba_JSON_bulkimporter software tool available Open Source under the Apache License).

A participant commented that the large size of the data files made downloading difficult in the past, and asked whether the file size of the Open Data files could be labelled to provide better guidance to users downloading the datasets. Mr. Miller explained that the JSON to CSV conversion tool was intended to convert test result files directly available on a user's device, but clarified that the size for fixed Open Data released with past fixed performance reports is noted for many files and staff will confirm that large files are labeled. Mr. Miller explained that files will be broken out into manageable sizes convenient for downloading.

A participant asked if test failures are recorded by the FCC Speed Test App. Mr. Miller explained that success conditions are defined and described in the data dictionary for all active metrics. Tests that successfully complete have the variable 'success' set to '1' indicating the conditions for a successful test were met but where some conditions were not met the success variable would be marked as '0'. A participant asked why a user would need JSON to CSV conversion tool and Mr. Miller explained that the tool would be useful for users or organizations interested in look at their own data.

A participant discussed some challenges in California with efforts to coordinate among users to pool test data, and whether the FCC Speed Test App would offer solutions to coordinating research among users of the App. Mr. Miller emphasized that the ability to export and share data empowers researchers, carriers, or other groups to pool data collectively to form separate and independent surveys that could accomplish their own research goals, while at the same time contributing data to the MBA Program for use in reports and release of de-identified Open Datasets. For example, users of the App and the JSON to CSV conversion tool could agree to convert their test results, including their precise GPS locations or time and dates of test, and develop geospatial or other research with the standards tools they use, e.g. Excel, Stata, Geoserver.

Mr. Miller moved on to talk about data process topics related to the 2016 Mobile Performance Report. He discussed that in past meetings the data processing techniques used to associate operator codes and names confirmed by providers with a carrier variable as well as cellular tests had been discussed. A participant asked how the Commission handles MVNOs and if they use different operator codes. Mr. Miller explained that Report processing was not focused on MVNOs, and that the methodology used to associate a given test focuses on a given carriers independently branded "flagship" services. He explained that while this approach was used for the initial mobile MBA report, other organizations or future reports may employ different approaches.

Regarding the table that holds network connection data, including carrier info and interface over which the test is being executed, Mr. Warner asked if the data are available from Apple handsets. Mr. Miller answered that data from IOS are more constrained than android network type, but network type of the bearer channel such as HSPA or LTE, is available. A participant asked why the upcoming report would exclude Apple devices when other FCC reports also report on IOS devices. Mr. Miller explained that the MBA Mobile Report focuses reporting on scheduled tests and Apple devices do not provide that functionality, and encouraged carriers or other organizations to contact Apple to inquire whether support for background tasks that would scheduled tests to execute will ever be supported.

SamKnows discussed ongoing development of tools for observing features of the measurement infrastructure that it will be soon be deployed. Mr. Miller explained that the tools may be of

interest for participants in the mobile measurement effort because the backend infrastructure is common to both the fixed and mobile measurements. As the client is trying to measure the performance characteristics of its connection, it connects to measurement servers that lie outside carriers network.

Samknows explained the server health dashboard tools and mentioned that only L3 platform servers are used for mobile network, whereas fixed side uses have both L3 and M-Lab servers. The development of the tool benefited from the help of a working group supported by MBA program participants who have reviewed the product and have provided feedback that it is ready for more general use. SamKnows also explained the value of "on-net" servers provided by participating carriers and encouraged mobile carriers to consider participating. Mr. Miller asked ISPs to consider this option and discussed the value of comparing on-net and off-net data in the fixed measurement effort. SamKnows explained that the hope is to release these tools sometime in the coming months. A participant asked what the thresholds were to identify problems versus faults. SamKnows explained that running review of the data, such as percentage of advertised speed, or other metrics were used in the methodology.

Mr. Miller thanked all the participants for their active participation in these meetings and encouraged participants to look for an invitation to an upcoming meeting via the collaborative distribution list in the coming weeks. Mr. Johnston thanked participants for their attendance and closed the meeting.

Sincerely,

/s/ James Miller

James Miller, Senior Attorney Advisor
Electromagnetic Compatibility Division/OET
Federal Communications Commission